

Work Order ID 73492

Thursday, September 01, 2011 11:53:16 AM



Page 1

Item ID: D6102-013

Accept



Setup Start



Revision ID:

Item Name: Saddle Billet

Stop



Start Date: 9/1/2011 Start Qty: 60.00



Cust Item ID:

Required Date: 9/14/2011 Req'd Qty: 60.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D6102

Rev D

100

0.00



PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: 14819 a) Description: Aluminum Billet b) 7.000" x 6.500" x 2.000" thick c) Tolerance on all dimensions is +0.06/0.00 d) Grain direction along 6.500" length e) Material: 6061-T6/T6511 (QQ-A-250/11 or QQ-A-200/8) f) Material release certifi

CL 11/09/02 60

110

0.00



Receive & Inspect for Damage & Mat'l Certs

Packaging

Memo

0.00

Packaging

Ensure material certification is attached

Pu/Sp (60)

120

0.00



QC6- Inspect dimensions to drawing

QC

Memo

0.00

Quality Control

Check certification to Dwg D6102 for compliance

CL 11/09/28

60

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 73492

Thursday, September 01, 2011 11:53:16 AM



Item ID: D6102-013

Accept



Setup Start



Revision ID:

Stop



Item Name: Saddle Billet

Start Date: 9/1/2011 Start Qty: 60.00



Cust Item ID:

Required Date: 9/14/2011 Req'd Qty: 60.00



Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

Identify as per dwg & Stock Location: MAT46 0.00

mk 11/09/28

60



Packaging

Memo

0.00

Packaging

140

QC21- Final Inspection - Work Order Release 0.00

0.00



QC

Memo

Quality Control

11/10/13
MF
11-09-29

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, September 01, 2011 11:53:13 AM

Work Order ID: 73492

Parent Item: D6102-013

Parent Item Name: Saddle Billet



Start Date: 9/1/2011

Required Date: 9/14/2011

Start Qty: 60.00

Required Qty: 60.00

Comments: IPP Rev:A New Issue 06-07-03 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D6102-013P

Purchased

No

110

Each

0.0000

1

60



6061-T6 7.0x6.5x2.0



Rec'd 9/27 (60)

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

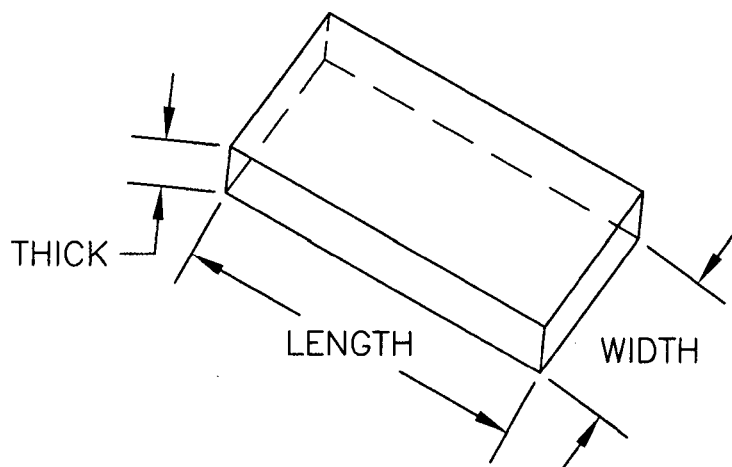
NCR:			WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN #	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED CP	APPROVED #	DRAWING NO. D6102	Rev. D SHEET 1 OF 1
DATE 06.06.30		TITLE SADDLE BILLET, 6061	SCALE NTS
A	01.03.30	NEW ISSUE	
B	03.10.20	ADD D6102-005/-007/-009	
C	04.08.25	ADD D6102-010/-011	
D	06.06.30	ADD D6102-013	

SPECIFICATION CONTROL DRAWING

**RELEASED**

06 08 15 #

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.06/-0.00), AND GRAIN DIRECTION AS SHOWN.

TOLERANCE ON ALL DIMENSIONS IS +0.06/-0.00.

ALL DIMENSIONS ARE IN INCHES.

W/073492

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6102-001	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.880	6.250	2.000	Along 7.880 Length
D6102-003	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.000	6.250	2.000	Along 6.000 Length
D6102-005	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	47.85	15.250	1.000	Along 47.85 Length
D6102-007	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.500	7.000	2.500	Along 7.500 Length
D6102-009	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	11.000	6.000	5.000	Along 11.000 Length
D6102-010	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.950	8.250	2.500	Along 7.950 Length
D6102-011	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.500	8.250	2.500	Along 6.500 Length
D6102-013	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.500	7.000	2.000	Along 6.500 Length

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Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PO REPRINT

Purchase Order ID PO14819

Purchase Order Date 9/2/2011

PO Print Date 9/6/2011

Page Number 2 of 3

Order From :

VC-MET001

METAUX CASTLE
A.M. CASTLE & CO. (CANADA) INC. - BOX B9204 PO BOX 9100
TORONTO, ON M4Y 3A5
CA

Contact Name		Buyer	Chantal Lavoie
Vendor Phone	514 694 9575	Requisition Nbr	
Vendor Fax	514 695 3281	Tax Resale Nbr	10127-2607
Vendor Account Nbr		Terms	Net 30
		Currency	CAD
		FOB	Destination-Collect

Special Inst: AS PER DWG D6101 REV. B
B73420
MATERIAL: 7075-T7351 (QQ-A-
250/12)
TOLERANCE ON ALL DIMENSIONS
ARE +0.030"/-0.000"
SIZE: 5.00" X 8.250" X 2.50" THICK
GRAIN DIRECTION ALONG 5.00"
LENGTH

4 D6101-007P

7075-T7351
8.25X7.75X2.5

9/16/2011

40.00 Yours ppd

\$79.2500

\$3,170.00

Yes

Each

Special Inst: AS PER DWG D6101 REV. B
B73421
MATERIAL: 7075-T7351 (QQ-A-
250/12)
TOLERANCE ON ALL DIMENSIONS
ARE +0.030"/-0.000"
SIZE: 7.750" X 8.250" X 2.50" THICK
GRAIN DIRECTION ALONG 7.750"
LENGTH

5 D6102-013P

6061-T6 7.0x6.5x2.0

9/23/2011

60.00 Yours ppd

\$29.7500

\$1,785.00

Yes

Each

Special Inst: AS PER DWG D6102 REV. D
B73492
MATERIAL: 6061-T6/T6511 (QQ-A-
250/11 OR QQ-A-200/8)
SIZE: 7.000" X 6.500" X 2.000"
THICK
GRAIN DIRECTION ALONG 6.500"
LENGTH
TOLERANCE ON ALL DIMENSIONS
ARE +0.006/-0.000"

9/6/2011

**Castle Metals®**

A. M. Castle & Co.

BORDEREAU DE MARCHANDISES

Page 1 of 2

No de Formulaire d'Emballage / Shipment No:994855

Expédié de / Ship From: A. M. Castle & Co. (Canada) Inc. MONTREAL 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2		Vendu à / Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		Expédié à / Ship To: WILL CALL-MONTREAL 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		Livré à / Deliver To: WILL CALL-MONTREAL 835 SELKIRK AVENUE POINTE CLAIRE, QC H9R 3S2 CA	
Date d'expédition / Date Shipped	F.O.B.	Modalités de transport / Freight Terms		Transporteur / Carrier		No du Bon de connaissance / BOL No	
26-SEP-2011	ORIGIN	Prepaid		MANITOULIN		994855-2	

Détails d'expédition / Shipment Details	Destination finale / Final Destination Branch - MON
--	--

N° de commande / Order No		N° de ligne Line No	N° d'article / Item No	Description	
1690824		1	8641.MO	2.0000.PL.6061.T651.ALUMINUM.48.5000.144.5000 CUT 2SIDED TO 7 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 6.5")) X 6.5 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 6.5")) - ALUMINUM PLATE SAW SPECIFICATIONS: QQ-A-250/11	
N° de bon de commande / Purchase Order No		Nbre de pièces / Part Number		Qté commandée / Ordered Qty	Qté Facturée / Invoice Qty
14819		YOUR ITEM NUMBER: D6102-013		60.00 PCS	60 PCS

Détails / Details							
N° de livraison / Delivery No : 95083312	Usine / Mill	No de coulée / Heat Number 550283A6	Code mec / Mech Id	Pièces / PCS 60	Largeur (Pouce)/ Width (IN)	Longueur (Pouce)/ Length (IN)	Qté expédiée/ Shipped Qty(LBS) 546.85

Ces marchandises/technologies sont sujettes aux règlements de l'Export Administration et du département d'état des États-Unis. Si elles ont été/sont exportées, elles doivent se conformer à ces règlements. Toute modification du contrat de transport contraire aux lois des États-Unis est interdite.

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.

Nous certifions par la présente que le matériel couvert par cette certification est conforme aux spécifications susmentionnées et aux exigences applicables pour le matériel, y compris toute spécification faisant partie de la description. Les rapports d'essai sont archivés pour fins de consultation. Toute requête concernant du matériel défectueux sera rejetée à moins qu'elle ne soit faite par écrit à A. M. Castle & Co. dans les 60 jours suivant la livraison. Le matériel coupé sur mesure ou coupé par le client ne peut être retourné pour crédit.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Ce matériel a été reçu et inspecté par

Date:

Name:

SHIP TO:

AM CASTLE & CO
3400 NO WOLF ROAD
FRANKLIN PARK, IL 60131

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

SOLD TO:

AM CASTLE & CO- SOLD TO
1420 KENSINGTON RD
SUITE 220
OAK BROOK, IL 60523

Serial Number

4228813

CUSTOMER PO NUMBER: 112492		WORK PACKAGE:	CUSTOMER PART NUMBER: 8641 AMC A96061-161		SHIP RUN/LOAD: 102067/17	GOV'T CONTRACT NUMBER:	
KAISER ORDER NO: 1117643	LINE ITEM: 3	SHIP DATE: 7-JUN-2011	ALLOY: 6061	CLAD: BARE	TEMPER: T651	PRODUCT DESCRIPTION: KaiserSelect® Precision Plate	
WEIGHT SHIPPED: 8440 LB	QUANTITY: 6 PCS EST.	B/L NUMBER: 2032383		GAUGE: 2.0000 IN		DIAMETER/WIDTH: 48.500 IN	LENGTH: 144.500 IN

Certified Specifications

AMS 4027/RevN

ASME SB 209/Rev2004

ASTM B 209/Rev07

Test Code: 1511

Test Results

Lot: 550283A6 Cast 819 Drop 39 Ingot 3 Melted in USA

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T651	LT / 2 (Min:Max)	47.9 : 49.0 (330 : 338)	42.1 : 42.8 (290 : 295)	14.7 : 14.8

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.67	0.5	0.29	0.12	1.0	0.16	0.12	0.02	0.01	0.00	TOT 0.06

ALLOY LIMITS

	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
6061												
MIN	0.40	0.0	0.15	0.00	0.8	0.04	0.00	0.00	0.00	0.00	EACH	0.05
MAX	0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	0.05	0.05	TOT	0.15

Aluminum Remainder

TEST NOTES

6061 sheet or plate certified to AMS 4025, AMS 4026, or AMS 4027 also meets applicable requirements of AMS-QQ-A-250/11 Rev.A.

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4228813

Castle Metals FP
HEAT NUMBER 550283 A6
MECHANICAL ID _____
ITEM CODE 8641
LOT NUMBER _____
PO NUMBER 112492
RECEIPT DATE 6-10-2011
SUPPLIER KAISER
SPECIFICATION _____
LCS NO
COMMENT _____
APPROVED PS

CERTIFICATION

KAISER ALUMINUM FABRICATED PRODUCTS, LLC (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED IN THE UNITED STATES OF AMERICA OR A QUALIFYING COUNTRY PER DFARS 225.872-1(a), WAS MANUFACTURED IN THE UNITED STATES OF AMERICA, AND MEETS THE REQUIREMENTS OF DFARS 252.225 FOR DOMESTIC CONTENT. THIS MATERIAL HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF KAISER ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTIRE ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO-9001:2000 CERTIFIED.



BILL POYNOR, LABORATORIES SUPERVISOR